

# **A status quo review of approach, method, and empirical studies on assessing the impacts of climate change variability on agriculture**

## **ABSTRACT**

It is no longer contentious that climate change has a serious impact on agriculture for the past decades with varying consequences across the globe. These consequences are beneficial to some areas while others the story is disastrous. Therefore, estimating the impact of climate change variability has been the onus of many academic and professional researchers using various methods and approaches such as the partial equilibrium models or the economy-wide models. This review paper therefore, highlights on the various methods and approaches use to estimate the impact of climate change variability on crop production and further reviewed past empirical studies with a view to, (a) understanding the merits and demerits of each method and approach; (b) understanding the regional spread of the past research directions and current knowledge across the globe including Malaysia. The paper concluded by drawing attention to the need in paradigm shift. Refocusing future research efforts toward integrated vulnerability assessment as it offers fuller appreciation of the roles of adaptation in facilitation, supporting, and invariably sustaining the communities affected by the climate change vulnerability as suggested by many scientific bodies including the Intergovernmental Panel on Climate Change (IPCC).

**Keyword:** Climate change; Variability; Impacts; Agriculture; Crop production; Approach

